

Contributors to This Issue

Václav E. Beneš, A.B., 1950, Harvard College; M.A. and Ph.D., 1953, Princeton University; Bell Laboratories, 1953—. Mr. Beneš has pursued mathematical research on traffic theory, stochastic processes, frequency modulation, combinatorics, servomechanisms, and stochastic control. In 1959–60, he was visiting lecturer in mathematics at Dartmouth College. In 1971, he taught stochastic processes at SUNY Buffalo, and from 1971–72, he was Visiting MacKay Lecturer in electrical engineering at the University of California in Berkeley. He is the author of two books in his field. Member, American Mathematical Society, Association for Symbolic Logic, Institute of Mathematical Statistics, SIAM, Mathematical Association of America, Mind Association, IEEE.

G. Samuel Brockway, B.S., 1966, University of Miami; M.S., 1968, Georgia Institute of Technology; Ph.D., 1972, California Institute of Technology; assistant professor of mechanical engineering, Texas A&M University, 1972–75; research scientist, R & D Associates, Marina del Rey, California, 1975–76; Bell Laboratories, 1976—. Prior to joining Bell Laboratories, Mr. Brockway was engaged in theoretical studies into the propagation of shock waves in elastic materials, the nonlinear mechanical behavior of materials subject to microstructural damage and the growth of cracks in viscoelastic media. He is presently involved in the application of various areas of mechanics such as elasticity, viscoelasticity and fracture mechanics to the selection and development of plastics for use in fiber optic as well as traditional wire media.

Fan R. K. Chung, B.S., 1970, National Taiwan University; Ph.D., 1974, University of Pennsylvania; Bell Laboratories, 1974—. Mrs. Chung's current interests include combinatorics, graph theory, and the analysis of algorithms. She is presently investigating various problems in the theory of switching networks.

Leonard G. Cohen, B.E.E., 1962, City College of New York; Sc.M., 1964, and Ph.D. (Engineering), 1968, Brown University; Bell Laboratories, 1968—. At Brown University, Mr. Cohen was engaged in research

on plasma dynamics. At Bell Laboratories, he has concentrated on optical fiber transmission studies. Member, Sigma Xi, Tau Beta Pi, Eta Kappa Nu; senior member, IEEE.

Francis P. Duffy, B.A., 1965 King's College; M.S., 1968, Stevens Institute of Technology; Bell Laboratories, 1965—. Mr. Duffy has been involved in conducting statistical surveys to determine telephone network performance and customer behavior characteristics. Currently he is involved in studying voice signal powers in the telephone network.

R. M. Hunt, A.E., 1962, Wentworth Institute; B.S. (physics), 1966, Kansas State University; M.S. (engineering science), 1968, Purdue University; Bell Laboratories, 1961–1963, 1966—. Mr. Hunt completed detectability studies of acoustic ringing signals, worked on the design and development of piezoelectric and electromagnetic tone ringer transducers, and studied ringer sound power measuring techniques. Most recently, he has done computer-aided design of electromechanical ringers. Member, ASA.

Frank K. Hwang, B.A., 1960, National Taiwan University; M.B.A., City University of New York; Ph.D. (Statistics), 1968, North Carolina State University; Bell Laboratories, 1967—. Mr. Hwang spent the fall of 1970 visiting the Department of Mathematics of National Tsing-Hua University. He has been engaged in research in statistics, computing science, discrete mathematics, and switching networks.

Raymond E. Jaeger, Ph.D. in ceramics, Rutgers University. He is currently Director of Research and Development at Galileo Electro-Optics Corporation. Prior to this, he spent 17 years at Bell Laboratories, Murray Hill, New Jersey, as member of technical staff. While at Bell, he worked in the Metallurgical Laboratory on a variety of materials-related engineering development programs. Member, American Ceramic Society.

Ivan P. Kaminow, B.S.E.E., 1952, Union College, New York; M.S.E., 1954, University of California, Los Angeles; A.M., 1957, Ph.D., 1960, Harvard University. Hughes Aircraft, Co., Culver City, CA (1952–1954); Bell Laboratories, 1954—. Mr. Kaminow has done research on microwave antennas, ferrites, ferroelectrics, nonlinear optics, raman scattering, electro-optic devices and optical fibers. Fellow, IEEE, APS, OSA.

John B. MacChesney, B.A., 1951, Bowdoin College; Ph.D., 1959, Pennsylvania State University; Bell Laboratories, 1959—. Mr. MacChesney has worked on a variety of materials-related problems. Currently he is engaged in the development of processes for molding preforms for optical fibers.

Wanda L. Mammel, A. B. (mathematics), 1943, Winthrop College; M.Sc. (applied mathematics), 1945 Brown University; Bell Laboratories, 1956—. Ms. Mammel is engaged in finding mathematical methods for the numerical solution of a variety of problems. In particular, she has applied linear programming techniques to problems of crystal plasticity. At present she is working on problems in microwave propagation and optical waveguides.

L. M. Manhire, B.S., 1973, Lebanon Valley College; M.S. (applied math), 1976, Fairleigh Dickenson University; Bell Laboratories, 1973—. Ms. Manhire has been concerned with the 1973 Bell System customer loop survey. She is presently engaged in software development for nonurban studies including long route design and pair gain applications.

Robert A. Mercer, B.S. (physics), 1964, Carnegie-Mellon University; Ph.D. (Physics), 1969, Johns Hopkins University; Bell Laboratories, 1973—. Mr. Mercer has done research in experimental high-energy physics as a research associate at Johns Hopkins and as an assistant professor at Indiana University from 1970 to 1973. He joined Bell Laboratories as a member of the Network Performance Characterization Department, and currently is supervising a group involved in modeling and analysis of Bell System network performance. Member, American Physical Society, Sigma Xi.

Calvin M. Miller, B.S.E.E., 1963, North Carolina State University at Raleigh; M.S.E., 1966, Akron University; Goodyear Aerospace Corporation, 1963–1966; Martin Marietta Company, 1966–1967; Bell Laboratories, 1967—. Prior to joining Bell Laboratories, Mr. Miller designed electronic and optical components of side-looking radar processor equipment and control systems for reentry vehicles and aircraft flying simulators. At Bell Laboratories, Mr. Miller developed equipment and methods for transmission line characterization. His present interests are in the area of fiber optics as a practical transmission medium. He is

supervisor of an exploratory optical fiber splicing group. Member, OSA.

Thomas J. Miller, B.S., 1968, and M.S., 1975 (ceramic science), Rutgers University; Bell Laboratories, 1968—. Mr. Miller has worked on the non-conventional processing of ceramic powders. He is presently concerned with the fabrication of high-strength optical fibers and the development of preform preparation processes.

F. W. Mounts, E.E., 1953, M.S., 1956, University of Cincinnati; Bell Telephone Laboratories, 1956—. Mr. Mounts has been concerned with research in efficient methods of encoding pictorial information for digital television systems. Member, Eta Kappa Nu; Senior Member, IEEE.

Arun N. Netravali, B. Tech. (Honors), 1967, Indian Institute of Technology, Bombay, India; M.S., 1969 and Ph.D. (E.E), 1970, Rice University; Optimal Data Corporation, Huntsville, Alabama, 1970-1972; Bell Laboratories, 1972—. Mr. Netravali has worked on various aspects of signal processing. Member, Tau Beta Pi, Sigma Xi.

J. W. Nippert, B.S. (engineering science), 1970, Purdue University; M.S. (engineering science), 1971, Purdue University; Bell Laboratories, 1970—. Mr. Nippert authored circuit analysis programs, developed circuit models for telephone components, did computer-aided design of electromechanical ringers, and wrote the software for a microprocessor-based small PBX-like system. Currently, he is developing new features for the SPC network. Member, Tau Beta Pi, Sigma Gamma Tau, Omicron Delta Kappa. Professional Engineer, Indiana, 1977,

Birendra Prasada, B.S., 1953, M.S., 1955, Banaras University; Ph.D., 1960, University of London; Central Electronics Engineering Research Institute, Pilani, India, and Defense Science Laboratory, Delhi, India, 1961-1963; Massachusetts Institute of Technology, 1965-1966; Indian Institute of Technology, 1968-1972; Bell Laboratories, 1963-1965, 1973-1976; Bell Northern Research, 1976—. Mr. Prasada's main research and teaching interests are in the areas of visual communications, systems engineering, systems design, and human communication. He has worked

as an industrial consultant in India and the United States. Member, 1963, Senior Member 1976, IEEE.

Irwin W. Sandberg, B.E.E., 1955, M.E.E., 1956, and D.E.E., 1958, Polytechnic Institute of Brooklyn; Bell Telephone Laboratories, 1958—. Mr. Sandberg has been concerned with analysis of radar systems for military defense, synthesis and analysis of active and time-varying networks, several fundamental studies of properties of nonlinear systems, and with some problems in communication theory and numerical analysis. His more recent interests include macroeconomics, the theory of social groups, and the economic theory of large corporations. Fellow and member, IEEE; member, American Association for the Advancement of Science, Eta Kappa Nu, Sigma Xi, and Tau Beta Pi.

Charles M. Schroeder, A.S. (electromechanical), 1969; Western Electric Engineering Research Center, 1967—. Mr. Schroeder was initially involved with the design and retrofitting of optical packages for thin film projection and near contact printing systems. In fiber optics, his primary work was in fiber ribbon stripping and multiple fiber splicing, and is now in fiber coatings.

George M. Yanizeski, B.S., 1964, M.S., 1965, Ph.D., 1968 (civil engineering), Carnegie-Mellon University; instructor, Carnegie-Mellon University, 1967-68; member of technical staff, Bellcomm, Inc., 1968-72; Bell Laboratories, 1972—. At Bellcomm, Mr. Yanizeski participated in the analysis and engineering of thermal control systems on NASA's Skylab orbiting space station. At Bell Laboratories, he has been involved in a series of theoretical and experimental studies characterizing and quantifying the mechanical performance of telephone cable, and he has been involved in several projects to develop new sheath designs employing new polymeric materials.

